DRAFT

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February __, 2018

Mark Manfredi
Red Hill Regional Program Director
Naval Facilities Hawaii
400 Marshall Road
Joint Base Pearl Harbor Hickam, Hawaii 96860

Re: Comments on Ongoing Work to Satisfy the AOC Requirements of 7.1.3 (Groundwater Flow Model Report) and 7.2.3 (Contaminant Fate and Transport Report).

Dear Mr. Manfredi:

The U.S. Environmental Protection Agency ("EPA") and Hawaii Department of Health ("DOH"), collectively the "Regulatory Agencies", appreciate the significant level of effort devoted by the Navy and its contractors to satisfy the AOC requirements referenced above.

As part of the effort, the Navy has hired experts in groundwater modeling, obtained assistance from the US Geologic Service via an interagency agreement, and has held numerous meetings with the Regulatory Agencies and subject matter expert agencies such as Department of Land and Natural Resources and Honolulu Board of Water Supply.

The objective of this modeling effort is to develop tools to help characterize risk to groundwater and drinking water from past and potential future releases from the Red Hill fuel storage facility. However, with any groundwater modeling effort, the utility of the model to influence decisions is highly dependent on the quality and resolution of data used to develop the model along with the rigor of the model calibration.

Recently, the Regulatory Agencies have hired additional technical specialists to advise us on some of the more complex aspects of this modeling effort. These additional specialists supplement our current team of consultants, a University of Hawaii Expert, and in house experts. Based on input from these specialists from their observations during meetings and from presentations and material provided over the last couple of months, we have the following concerns:

- The Navy consultant's effort appears to be prematurely reaching conclusions regarding groundwater flow and contaminant fate and transport.
- The Navy consultant's approach to simplification of lithology in the initial model will not render a conservative evaluation of potential flow directions.
- Aspects of the Conceptual Site Model presented by the Navy consultants are not sufficiently supported by data.
- The Navy consultants currently do not appear to have clear plans for a robust uncertainty analysis of any results derived from the model.
- The Navy consultant's initial analysis of NAPL fate, transport, and transformation in the unsaturated zone is not likely conservative and appears to be inconsistent with environmental data collected at the site.

Therefore, we request the Navy to respond in writing to these concerns. In order to further illustrate the Regulatory Agencies' concerns, we are attaching detailed comments received from our consultants. The Navy should consider these detailed comments as part of their response.

The Regulatory Agencies goal for the flow model and fate and transport model is for these tools, developed by the Navy and its consultant, to have significant utility for helping to inform several critical Red Hill decisions. These decisions such as tank upgrades, sentinel well placement, and contingency planning can be significantly influenced by modeling tools that can withstand rigorous scrutiny allowing for the regulatory agencies to consider and rely on these tools to influence decisions.

Please feel free to contact us if you would like to further discuss.

Attachments:

AQUI-VER comments
SS Papadapolous comments